

What is claimed is:

1. A method for maintaining a communication session by a back end device in a communication system, the method comprising:
  - 5 determining that the communication session has or will be disrupted; saving state information relating to the communication session; and subsequently re-establishing the communication session using the saved state information.
- 10 2. The method of claim 1, wherein determining that the communication session has or will be disrupted comprises:
  - 15 determining that the communication session has failed.
- 15 3. The method of claim 2, wherein determining that the communication session has failed comprises:
  - 20 monitoring for a predetermined signal; and failing to receive the predetermined signal for a predetermined amount of time.
- 25 4. The method of claim 1, wherein determining that the communication session has or will be disrupted comprises:
  - 25 determining that it is necessary or desirable to disrupt the communication session.
- 30 5. The method of claim 1, wherein saving the state information relating to the communication session comprises:
  - 35 saving the state information for up to a predetermined amount of time.
- 35 6. The method of claim 1, wherein the communication session is associated with an access point device, and wherein re-establishing the communication session using the saved state information comprises re-establishing the communication through the access point device.

7. The method of claim 1, wherein the communication session is associated with an access point device, and wherein re-establishing the communication session using the saved state information comprises re-establishing the communication session through a different access point device.
8. The method of claim 7, wherein re-establishing the communication session through the different access point device comprises:
  - 10 associating the state information with the different access point device.
9. The method of claim 1, wherein the communication session comprises a Bluetooth communication session.

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10. A device for maintaining a communication session, the device comprising:

session monitoring logic operably coupled to determine that the communication session has or will be disrupted;

5 state maintenance logic operably coupled to save state information relating to the communication session; and

session re-establishment logic operably coupled to subsequently re-establish the communication session using the saved state information.

10 11. The device of claim 10, wherein the session monitoring logic is operably coupled to determine that the communication session has failed.

12. The device of claim 11, wherein the session monitoring logic is operably coupled to monitor for a predetermined signal and determine that 15 the communication session has failed upon failing to receive the predetermined signal for a predetermined amount of time.

13. The device of claim 10, wherein the session monitoring logic is operably coupled to determine that it is necessary or desirable to disrupt the 20 communication session.

14. The device of claim 10, wherein the state maintenance logic is operably coupled to save the state information for up to a predetermined amount of time.

25 15. The device of claim 10, wherein the communication session is associated with an access point device, and wherein the session re-establishment logic is operably coupled to re-establish the communication session through the access point device using the saved state information.

30 16. The device of claim 10, wherein the communication session is associated with an access point device, and wherein the session re-

establishment logic is operably coupled to re-establish the communication session through a different access point device using the saved state information.

- 5    17. The device of claim 16, wherein the session re-establishment logic is operably coupled to associate the state information with the different access point device.
- 10    18. The device of claim 10, wherein the communication session comprises a Bluetooth communication session.
19. The device of claim 10, wherein the device is a back end device that implements upper protocol layers of a wireless communication protocol.

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20. A computer program for controlling a computer system to maintain a communication session, the computer program comprising:
- session monitoring logic programmed to determine that the communication session has or will be disrupted;
- state maintenance logic programmed to save state information relating to the communication session; and
- session re-establishment logic programmed to subsequently re-establish the communication session using the saved state information.
- 10 21. The computer program of claim 20, wherein the session monitoring logic is programmed to determine that the communication session has failed.
22. The computer program of claim 21, wherein the session monitoring logic is programmed to monitor for a predetermined signal and determine that the communication session has failed upon failing to receive the predetermined signal for a predetermined amount of time.
- 15 23. The computer program of claim 20, wherein the session monitoring logic is programmed to determine that it is necessary or desirable to disrupt the communication session.
- 20 24. The computer program of claim 20, wherein the state maintenance logic is programmed to save the state information for up to a predetermined amount of time.
- 25 25. The computer program of claim 20, wherein the communication session is associated with an access point device, and wherein the session re-establishment logic is programmed to re-establish the communication session through the access point device using the saved state information.
- 30 26. The computer program of claim 20, wherein the communication session is associated with an access point device, and wherein the session re-

establishment logic is programmed to re-establish the communication session through a different access point device using the saved state information.

27. The computer program of claim 26, wherein the session re-establishment logic is programmed to associate the state information with the different access point device.

28. The computer program of claim 20, wherein the communication session comprises a Bluetooth communication session.

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29. The computer program of claim 20, further comprising:  
protocol logic for implementing upper protocol layers of a wireless communication protocol.

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30. A communication system comprising a number of access point devices that each implement a first protocol layer of a wireless communication protocol and a back end device that implements a second protocol layer of the wireless communication protocol on behalf of the number of access point devices, wherein the back end device is operably coupled to save state information for a communication session upon determining that the communication session has or will be disrupted and subsequently re-establish the communication session using the saved state information.
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- 10 31. The communication system of claim 30, wherein the communication session is associated with an access point device, and wherein the back end device is operably coupled to re-establish the communication session through the access point device.
- 15 32. The communication system of claim 30, wherein the communication session is associated with an access point device, and wherein the back end device is operably coupled to re-establish the communication session through a different access point device.
- 20 33. The communication system of claim 32, wherein the back end device is operably coupled to associate the saved state information with the different access point device.
- 25 34. The communication system of claim 30, wherein the wireless communication protocol comprises a Bluetooth wireless communication protocol.
35. The communication system of claim 34, wherein the first protocol layer is a lower protocol layer of the Bluetooth wireless communication protocol, and wherein the second protocol layer comprises an upper protocol layer of the Bluetooth wireless communication protocol.
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36. The communication system of claim 30, wherein the communication session is associated with a terminal equipment device that communicates with the back end device through an access point device, and wherein the back end device is operably coupled to determine that the communication session is disrupted upon failing to receive a predetermined signal from the terminal equipment device for a predetermined amount of time.
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37. In a communication system in which a terminal device accesses a communication network through one of a plurality of access point devices that implement a first protocol layer of a wireless communication protocol and a back end device that implements a second protocol layer of the wireless communication protocol, a method for moving the terminal device from a first access point device to a second access point device, the method comprising:

saving state information for the terminal device by the back end device;  
terminating communication with the terminal device over the first  
access point device; and  
re-establishing communication with the terminal device over the second access point device using the saved state information.

38. The method of claim 37, wherein the first access point device is congested, and wherein re-establishing communication with the terminal device over the second access point device using the saved state information is done to avoid the congestion at the first access point device.

39. The method of claim 37, wherein re-establishing communication with the terminal device over the second access point device using the saved state information is done for load balancing purposes to split network traffic between the first access point device and the second access point device.

40. The method of claim 37, wherein the first access point device and the second access point device are in different service provider systems, and wherein re-establishing communication with the terminal device over the second access point device using the saved state information is done to move the terminal device to a predetermined service provider system.

41. The method of claim 37, wherein re-establishing communication with the terminal device over the second access point device using the saved state

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information is done for cost purposes to move the terminal device to a less expensive access point device.

42. In a communication system in which a terminal device accesses a communication network through one of a plurality of access point devices that implement a first protocol layer of a wireless communication protocol and a back end device that implements a second protocol layer of the wireless communication protocol, a method for using information related to the terminal device, the method comprising:

saving information for the terminal device by the back end device; and  
using the saved information.

10 43. The method of claim 42, wherein using the saved information comprises:

using the saved information for accounting purposes.

15 44. The method of claim 42, wherein using the saved information comprises:

using the saved information for network management purposes.

20 45. The method of claim 42, wherein using the saved information comprises:

using the saved information for user tracking purposes.

46. The method of claim 42, wherein using the saved information comprises:

using the saved information for user locating purposes.

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